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AUTHOR	Senne, Terry A.; Rikard, G. Linda
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ABSTRACT

The objectives of this paper are: to briefly describe how teaching portfolios, in tandem with the Teaching/Learning Framework (Sprinthall & Thies-Sprinthall, 1983) can be employed as a developmental intervention to promote stage growth in teacher candidates; to report developmental stage change (moral judgment/principled thinking) results from three developmental portfolio intervention studies; and to draw implications as to the potential use and value of a deliberate, developmental teaching portfolio intervention in the promotion of teacher candidate professional growth. Findings relative to the intervention impact on teacher candidate development (moral judgment) are reported. The data were extracted from three portfolio studies whereby the teaching portfolio intervention, employing a cognitive developmental framework, served as the independent variable. The common dependent variable amongst studies was moral judgment, as measured by Rest's (1986) Defining Issues Test (DIT). Studies 1 and 2 participants were enrolled in the internship semester of their teacher education program. Study 3 consisted of a cohort in their final three semesters of coursework. DIT pre- and post-tests were conducted prior to and following the intervention. Participants were comprised of intact groups (voluntary participants); therefore, findings cannot be generalized except to similar populations. Both one-semester implementation studies revealed no significant gains in moral judgment reasoning. However, significant differences in DIT gain scores were reported for the cohort that received the developmental portfolio intervention. The time factor (continuity) may be a critical factor in promoting stage growth in moral development. (Contains 37 references.) (Author/SM)

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The Teaching Portfolio as a Developmental Intervention: Promoting Developmental Stage Growth in Physical Education Teacher Candidates

Terry A. Senne, Ph.D.
sennet@mail.ecu.edu
East Carolina University
Department of Exercise & Sport Science
152 Minges Coliseum
Greenville, NC 27858-4353

G. Linda Rikard, Ed.D.
lrikard@gmu.edu
George Mason University
Department of Health, Fitness, & Recreation Resources

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Terry A. Senne

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Abstract

The objectives of this paper are three-fold: (a) to briefly describe how teaching portfolios, in tandem with the Teaching/Learning Framework (Sprinthall & Thies-Sprinthall, 1983) can be employed as a developmental intervention to promote stage growth in teacher candidates, (b) to report developmental stage change (moral judgment/principled thinking) results from three developmental portfolio intervention studies, and (c) to draw implications as to the potential use and value of a deliberate, developmental teaching portfolio intervention in the promotion of teacher candidate professional growth. Findings relative to the portfolio intervention impact on teacher candidate development (moral judgment) are reported. The data were extracted from three portfolio studies whereby the teaching portfolio intervention, employing a cognitive developmental framework, served as the independent variable. The common dependent variable amongst studies was moral judgment, as measured by Rest's (1986) Defining Issues Test (DIT). Studies' 1 and 2 participants were enrolled in the internship semester of their teacher education program. Study 3 consisted of a cohort in their final three semesters of course work. DIT pre- and posttests were conducted prior to, and following the intervention, respectively. Participants were comprised of intact groups (voluntary participants); therefore, findings cannot be generalized except to similar populations. Both one-semester implementation studies revealed no significant gains in moral judgment reasoning. However, significant differences in DIT gain scores were reported (+10.37; $.025>p>.01$) for the cohort that received the developmental portfolio intervention. The time factor (continuity) may be a critical factor in promoting stage growth in moral development.

The Teaching Portfolio as a Developmental Intervention:
Promoting Developmental Stage Growth in Physical Education Teacher Candidates

Since 1998, research on teaching portfolios has primarily focused on the portfolio as a means of assessment in teacher education programs (Anderson & DeMeulle, 1998; Darling-Hammond & Snyder, 2000; Trube & Madden, 2001). In addition, recent research has revealed an emphasis on the use of portfolios as a vehicle to promote teacher candidate reflection (Zeichner & Wray, 2001) and professional development/growth (Senne, 1997; Senne & Rikard, 2002). Portfolio development and implementation have become increasingly more commonplace in teacher education programs (Zeichner & Wray, 2001), and likewise within Physical Education Teacher Education (PETE) programs. Most teacher education programs have become "vested" in the teaching portfolio in one form or another, as various state accreditation agencies, schools of education, and current NCATE directives push for a performance-based product by which to ascertain the level of teacher candidate competencies for initial teacher and alternatively, continuing teacher licensure (Deitz, 1998; Porter, Youngs, & Odden, 2001). However, despite its popularity within the teacher education context, few systematic studies have been conducted on portfolio development with respect to assessment and/or developmental purposes (Lyons, 1998; Senne & Rikard, 2002; Zeichner & Wray, 2001).

Similarly, teacher professional development has become an emerging construct in recent years, particularly with respect to the adult learner (Sprinthall, Reiman, & Thies-Sprinthall, 1996). One such developmental construct proposes that teacher development is composed of three separate, yet interrelated dimensions: conceptual complexity, moral judgment reasoning (principled thinking), and ego complexity (Reiman & Thies-Sprinthall, 1998). The theoretical underpinning of this construct is based on cognitive developmental theory. One key theoretical assumption is that behaviors can be determined and predicted based on one's stage of development (Blasi, 1980; Hunt, 1976; Rest & Narvaez, 1994). This assumption is particularly salient with respect to teacher development. If teachers can be prompted to higher stages of development, their behaviors will illustrate a better way to resolve problems and address individual learner needs in the school context. Numerous studies relative to each of these

domains provide support for furthering developmental stage growth in teachers (Chang, 1994; Cummings & Murray, 1989; Hunt, 1974, 1976; MacCallum, 1993; Miller, 1981; Reiman & Parramore, 1994).

In light of the use of portfolio development as an intensive reflective tool and potential curricular vehicle for promoting teacher candidate professional development, this paper addresses three primary objectives:

- To briefly describe how teaching portfolios, in tandem with the Teaching/Learning Framework (Sprinthall & Thies-Sprinthall, 1983) can be employed as a developmental intervention to promote stage growth in preservice teachers,
- to report developmental stage change (moral judgment/principled thinking) results from three portfolio intervention studies, and
- to draw implications as to the potential use and value of a deliberate, developmental teaching portfolio intervention in the promotion of teacher candidate professional growth.

Although many other dependent outcome measures (quantitative and qualitative) were studied, for the purpose of this paper, only data specific to moral judgment are presented.

Developmental Portfolio Intervention

The developmental intervention employed the Teaching/Learning framework (Sprinthall & Thies-Sprinthall, 1983) as the conceptual model for portfolio development in each of the three studies addressed. This framework is based on cognitive developmental theory and is used to promote growth to more complex levels of psychological maturity or adult development. The framework is a social role-taking model that outlines conditions that promote psychological growth (Sprinthall & Thies-Sprinthall, 1983) and coaching components (Joyce & Showers, 1996) that promote skill acquisition. The conditions for promoting psychological growth include: a new, significant role-taking experience; guided reflection; a balance between experience (praxis) and reflection; support and challenge; and continuity. Skill acquisition components include: theory and rationale, effective modeling, practice and feedback, and adapting and generalizing the skill to one's own instructional repertoire. Thies-Sprinthall's (1984) findings demonstrated that significant development and skill acquisition occur when both conditions for promoting growth and coaching

components are employed in conjunction with one another. The Teaching/Learning framework has been used in a variety of teaching settings, as well as in other helping professions, to further professional growth and development (Glassberg & Sprinthall, 1980; Oja & Sprinthall, 1978; Peace, 1992; Reiman & Parramore, 1993; Thies-Sprinthall, 1984; Watson, 1995).

Conditions-For-Growth

The conditions-for-growth (adult development) component of the Teaching/Learning framework was incorporated in a variety of ways. The significant "new role-taking experience" condition was fulfilled as teacher candidates assumed the role of "teacher" during elementary and secondary teaching practica, and finally the internship. The remaining components of guided reflection, balance, support and challenge, and continuity are discussed with specific examples to illustrate this developmental portfolio intervention model in action.

Throughout teaching practica and internship experiences there was written "dialogue" or "guided reflection" on a weekly basis between investigator and teacher candidates. Weekly reflections focused on discoveries made during practica and internship, teacher candidate concerns, feelings, and questions. The teacher candidate concerns component (Fuller, 1969) was used to discern at what level of concern they were currently functioning; thus, aiding in the provision of appropriate feedback. The Adapted Flanders for Written Reflection Model (Reiman, 1988) was employed to assess where teacher candidates were developmentally, based on journal patterns of weekly reflections. For teacher candidates whose journal patterns exhibited lower levels of conceptual complexity, the investigator responded in a direct and structured format, while offering support and encouragement. For example, if a teacher candidate demonstrated frustration due to difficulty in establishing an effective behavior management plan, the investigator might suggest resources and specific management techniques that, with consistent application, could be implemented to improve this aspect of teaching.

In contrast, teacher candidates demonstrating higher levels of conceptual complexity received written, differentiated feedback that was more indirect and less structured. The investigator employed a more theoretical and complex level of questioning in response. For instance, if through written reflection a teacher candidate exhibited confidence in the employment

of a variety of instructional approaches, the investigator might challenge him or her to experiment with a selection of indirect instructional approaches not previously employed.

A "balance" between reflection and praxis (teaching) was embedded within the field-based experiences of teacher candidates. Reflections (both verbal and written) were employed as a means of assisting teacher candidates in constructing meaning derived from their teaching experiences, thus leading to a more "reflective practitioner" orientation.

Furthermore, concepts of matching and mismatching (Hunt, 1976) were employed as dictated through teacher candidate reflection journal patterns, in an effort to facilitate developmental growth. Accommodating or reinforcing one's current preferred stage of development is referred to as *matching* ("support"), or responding to one's developmental stage. When an individual demonstrates a readiness for more complexity, however, a *mismatch* or "challenge" is employed. The investigator employed the appropriate strategy, dependent upon teacher candidates' need for support or readiness for challenge. Application of careful differentiation provides for a more rigorous and intensive intervention to promote growth (Thies-Sprinthall, 1984); and therefore, might lend support to the Teaching/Learning conceptual framework as a potential intervention model for use in the development of teacher candidate portfolios and professional growth.

In addition to written dialogue, the investigator facilitated reflection during teaching practica debriefings and regularly scheduled internship seminars through the use of active listening (Gordon, 1974). The primary goal in active listening is to lead the speaker to a better understanding of his or her problems, thus facilitating the problem-solving process by allowing the speaker to derive his or her own solutions to the problem. Teacher candidates also interacted with one another as a regular part of their field-based teaching experiences. Note that reflection guided by clinical teachers and/or university supervisors during practica and internship was not controlled for. The rationale, thus being that the investigator had specific training in developmental supervision while others did not.

Lastly, the investigator provided "continuity" over the course of the teaching practica and internship experiences. Opportunities were provided on a regular basis for perspective-taking and

reflection, allowing the necessary time for praxis and reflection to occur. Furthermore, the investigator served in the capacity of professor for all methods courses and the internship seminar in which the developmental intervention was applied.

Coaching Model

The coaching component of the Teaching/Learning framework was mirrored in the application of an action plan for improvement in teaching that served as a primary focus of the INTASC Standard 9: Reflective Practice and Professional Growth section of the developmental teaching portfolio. Teaching effectiveness served as this component's major thrust. Teacher candidates assessed current teaching effectiveness and selected a specific teaching skill to develop during teaching practica and internship experiences. They provided "rationale" in support of their selected teaching skill focus. In addition, teacher candidates wrote measurable and observable teaching outcomes, illustrating the level of competence they wanted to attain. They were then required to seek resources and input to assist in the improvement of the selected teaching skill. One essential component of the coaching model is an effective "demonstration" or model of the selected teaching skill (e.g., a clinical teacher might serve in this capacity). Subsequently, teacher candidates "practiced" the skill in a variety of contexts while receiving "feedback" and documenting progress on the skill via systematic observation instruments. Once teacher candidates attained the level of competency desired, they "adapted and generalized" the selected teaching skill into their own instructional repertoire. As teacher candidates completed action plans, the process repeated itself with a new teaching skill focus. Furthermore, the investigator also used the Coaching Model to assist teacher candidates in developing their skills in portfolio construction, (refer to Figure 1).

Portfolio Categories & Content

Several changes occurred in portfolio categories and content from the initiation of study 1 to study 3, due to teacher candidate feedback, in addition to state and School of Education directives. The Developmental Teaching Portfolio Model (Senne, 1999) was employed in its current form (see Figure 2) for study 3. This portfolio model illustrates various components and categories as developed during the elementary methods, secondary methods, and internship

respectively. Lastly, large-scaled, directed reflections were embedded within the following portfolio components: instructional practices, classroom management, and reflective practice and professional growth (INTASC 9). These served as culminating reflections for the previously mentioned components.

Comparison Group Portfolio Model

Although no comparative portfolio model was applied in Study 1, Studies' 2 and 3 comparison group portfolio was based on Wallace's (1991) Reflective Practice model. Wallace described a concrete model for reflective practice as a key to connecting classroom theory to professional practice in support of teacher development. Overall, this conceptual framework was used to derive portfolio contents and categories, rather than serving as a means by which to implement the portfolio process. For further information on the description and use of this model with comparison groups, refer to Senne & Rikard (2002).

Developmental Stage Change – Moral Judgment

Participants

Participants for each study will be described briefly. Sample sizes, and nature of comparison groups vary from study to study due to extraction of the moral judgment outcome measure for the purpose of this paper.

Study 1. Study 1 consisted of a one-semester portfolio implementation during the internship phase (student teaching) of the PETE program. Participants were comprised of intact groups of undergraduate PETE students who voluntarily agreed to participate in the study during the student teaching semester (16 weeks). Both experimental (N = 16) and comparison groups (n = 10, n = 9; N = 19) attended southeastern universities. All groups were comparable in both curricular and field experience aspects. A deliberate, developmental portfolio intervention was conducted with the experimental group, while no portfolio implementation was employed with the comparison group. For demographic and descriptive statistics, refer to Senne (1997).

Study 2. Study 2 also consisted of a one-semester portfolio implementation during the internship phase of the respective PETE programs. A total of 67 interns participated in Study 2 (2 semesters of data combined). The experimental group (n = 34) received the developmental

portfolio implementation intervention, while the comparison group (n = 33) constructed portfolios without a deliberate developmental intervention. As in Study 1, both groups had comparable programs and field experiences. However, the comparison group interned at a dual-site placement (elementary and secondary component). Experimental group interns received a single site internship placement at a level of their choice (elementary, middle, or high school). Refer to Senne and Rikard (2002) for specific demographic and descriptive data.

Study 3. In contrast to the previous two studies, nine cohort teacher candidates from each of two PETE programs (same as Study 2) developed teaching portfolios in three consecutive semesters of comparable courses (elementary methods, secondary methods, and internship). Similar to Study 2, a deliberate, developmental portfolio implementation intervention was employed with the experimental group, while the comparison group constructed portfolios without such a cognitive developmental framework (Senne & Rikard, in progress).

Method

All studies employed a quasi-experimental, pretest/posttest design with respect to the developmental outcome measure of moral judgment in an attempt to determine whether a deliberate, developmental portfolio intervention based on cognitive developmental theory, guided reflection, and perspective-taking could facilitate teacher candidate professional development. A *t*-test was employed to analyze differences in moral judgment (DIT) initially as a determinant of group comparability; and subsequently, to determine whether significant differences in gain scores existed between or within respective programs. The DIT assesses the basic conceptual framework by which an individual analyzes a social-moral problem and judges the proper course of action. The DIT's underlying assumption is that individuals who are at different levels in their development will interpret moral dilemmas or problems of social justice differently.

Since developmental stage growth is directional, a one-tailed test of significance was employed at a .05 alpha level. As one dimension of teacher professional development, moral judgment has been used in a variety of developmental studies (Chang, 1994; Reiman & Parramore, 1994; Watson, 1995) and demonstrates both face and construct validity, in addition to test-retest reliability generally in the high .70s or .80s. Furthermore, two internal checks on

subject reliability are built into the instrument scoring mechanism (Rest, 1986). Teacher candidates completed the DIT at the beginning and end of their respective studies, varying from one to three semesters in length.

Results

The second objective of this paper is to report developmental stage change (moral judgment/principled thinking) findings in an attempt to determine whether a deliberate, developmental portfolio intervention based on cognitive developmental theory, guided reflection, and perspective-taking can facilitate teacher candidate professional development. Summary results are provided in Table 1. No significant differences in mean gain P scores on the DIT were found between experimental and comparison groups in Studies' 1 and 2. A between-group comparison for Study 3 was not calculated, due to loss of four of nine comparison group scores. Two comparison group test scores were dropped in the DIT analysis due to built-in internal consistency checks within the DIT scoring mechanism. Concurrently, two comparison group teacher candidates did not complete the DIT pretest and/or posttest; consequently leaving five comparison group scores for inclusion in the analysis. Therefore, it was not appropriate to compare gain scores between programs, or draw any conclusions with respect to within-group changes from pre- to posttest for the Study 3 comparison group.

Positive changes were noted for within-group mean DIT gain scores in both experimental and comparison groups in Studies' 1 and 2, ranging from +2.81 to +4.12. These findings, although positive, were not significant. In contrast, the Study 3 experimental group demonstrated significant within-group gain change (pre to post) with a mean gain change of +10.38.

Discussion & Implications

The third and final objective of this paper is to draw implications as to the potential use and value of a deliberate, developmental teaching portfolio intervention in the promotion of teacher candidate professional development.

Limitations

Existing limitations warrant consideration prior to formulating implications and conclusions based on data presented. First, with respect to Studies' 1 and 2, a single semester of

a developmental intervention was not sufficient in duration to facilitate or detect measurable change as indicated by the DIT results. Second, there was a loss of a significant number of interns from both programs during Study 2 on the DIT posttests. Sixty-seven interns participated in Study 2; however, investigators were only able to use the data of forty-two, due to built-in internal reliability checks in the DIT scoring mechanism. A possible loss of motivation might have increased the likelihood of a reactive effect to external validity in all three studies. Interns were posttested just prior to the end of the semester; and therefore, may not have taken the DIT seriously, since attention was primarily focused on their impending graduation and job search.

Third, the use of multiple developmental measures is supported in the literature. Reiman and Thies-Sprinthall (1993) contend that multiple developmental measures are more rigorous and beneficial in reducing the possibility of a Type II error. While Study 1 incorporated the Sentence Completion Test (Loevinger & Wessler, 1970) in addition to the DIT, Studies 2 and 3 were void of a second quantitative measure of developmental stage change, although it should be noted that additional qualitative data was used to assist in the interpretation of the results.

Fourth, several standardization of treatment limitations are evident across studies as well. Many interns chose to assume extra-curricular duties, in addition to the traditional student teaching load. This context was not controlled for. In addition, investigators did not control for the actions of clinical teachers or university supervisors. Furthermore, although content and implementation was consistent across the three-semester sequence in Study 3, the comparison cohort of teacher candidates had different professors in each of three portfolio implementation courses. In contrast, the experimental cohort's professor (investigator) remained constant throughout the intervention. And, while consistency was maintained with respect to the experimental group instructor, it may have resulted in examiner influence or bias—experimenter effect. We would argue, however, that the developmental portfolio intervention model employed is complex in nature, and requires an individual grounded in cognitive developmental theory to implement the intervention successfully in an attempt to promote teacher candidate professional development and skill acquisition. Therefore, the experimental cohort investigator was most qualified to implement this developmental intervention.

Finally, in support of non-standardization of treatment limitations, the following rationale is offered. Each developmental intervention study was field-based and therefore, was conducted in a naturalistic setting. A quasi-experimental design inherently lacks some standardization of treatment. However, Gage (1978) states that despite the lack of a true experimental study, much can be gained from conducting an investigation in the natural environment. Findings from true experimental studies are often unrealistic and provide inaccurate data, particularly in the educational context. Consequently, it is often preferable to bear with the standardization limitations and gain further insight into what truly occurs in the naturalistic educational setting.

Potential Use and Value of a Deliberate, Developmental Teaching Portfolio Intervention

Can a deliberate, developmental teaching portfolio intervention based on cognitive developmental theory promote teacher candidate professional development? The evidence remains inconclusive at this point in time; however, its potential has yet to be fully realized. Several critical theoretical and experiential aspects may provide some clues.

Continuity appears to be a major factor that must be addressed with respect to adult development and deliberate, developmental interventions. No significant DIT gain score changes were evident between the PETE program employing the developmental intervention and comparison programs that did not. Obtaining non-significant results in a relatively short intervention is not uncommon (Rest, 1994), although significant developmental gains of comparable intervention duration have been demonstrated (Glassberg & Sprinthall, 1980; Reiman & Parramore, 1993; Watson, 1995). However, Thies-Sprinthall (1984) emphasizes the importance of continuity and indicates that rarely will significant change occur in a short period of time.

In contrast, significant DIT gain score changes were reported for the experimental cohort in Study 3. It is possible that the time factor played a key role in the achievement of this outcome measure, although the significant change can't necessarily be directly attributed to the developmental intervention. Numerous developmental intervention studies of six or more months in duration have successfully documented significant stage change (Peace, 1992; Reiman & Thies-Sprinthall, 1993; Thies-Sprinthall, 1984). Additionally, it is important to consider the affect

with respect to the time factor as well. Participants completing portfolios during the internship only exhibited a variety of qualitative stress indicators. It is possible that the new, significant role of student teacher was sufficient, while the added responsibility of developing and completing a teaching portfolio for the first time during that same semester proved overwhelming.

It is not uncommon for teacher candidates to respond initially in a negative manner to new and challenging assignments, such as the portfolio. Oftentimes, it is difficult for them to see the "big picture" from the start, since they've not had prior experience in portfolio development. Typically the "awakening" occurs during the internship experience. Introducing new and challenging projects such as the portfolio can cause disequilibria or cognitive dissonance initially. Subsequently, as teacher candidates are able to accommodate and assimilate the task of portfolio development over three semesters, they become more capable of managing the task at hand, and move back toward a state of equilibration (Hunt, 1976). A mismatching (challenge) in order to promote developmental growth is necessary as teacher candidates learn to assume their new role-taking experiences. In previous one-semester studies on portfolio development (Senne, 1997; Senne & Rikard, 2002) the task was too great of a challenge when presented solely during the internship without prior orientation. Interns were sufficiently challenged in their new role as student teachers. Adding the demands of developing portfolios tipped the scales, resulting in a great state of disequilibria. Thus, it appears that the end products during one-semester implementations were counterproductive rather than growth producing.

A three-semester deliberate, developmental portfolio intervention may demonstrate the potential to be growth producing, as indicated by the experimental cohort DIT gain scores reported in Study 3. The continuity piece was further strengthened by the deliberate, developmental intervention design; whereby, the investigator served as professor for all three semesters of portfolio implementation. This provided not only a seamless integration of the developmental intervention via portfolio development, but also allowed for consistency across time. In tandem with the consistency concept, it is equally important to consider the relationship-building aspect over time. Perhaps having the same professor in this role for three consecutive

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semesters during the PETE program enabled the facilitation of relationship building amongst professor and teacher candidates, as well as amongst the candidates themselves.

In conclusion, it appears much work remains to be done with respect to further investigation on the employment of a deliberate, developmental portfolio intervention based on cognitive developmental theory, guided reflection, and perspective-taking as a means of facilitating teacher candidate professional growth. Replication studies employing a more refined intervention based on research and experience, in addition to the use of multiple developmental outcome measures may offer a more accurate picture of the effectiveness of the intervention. Continued investigation of this developmental curricular intervention, coupled with a stronger research design will serve to provide useful data in determining its untapped capabilities.

References

Anderson, R., & DeMeulle, L. (1998). Portfolio use in twenty-four teacher education programs. Teacher Education Quarterly, 25 (1), 23-31.

Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. Psychological Bulletin, 88 (1), 1-45.

Chang, F. (1994). School teachers' moral reasoning. In J. Rest & D. Narvaez (Eds.), Moral development in the professions: Psychology and applied ethics (pp. 71-83). Hillsdale, NJ: Erlbaum.

Cummings, A., & Murray, H. (1989). Ego development and its relation to teacher education. Teaching and Teacher Education, 5 (1), 21-32.

Darling-Hammond, L., & Snyder, J. (2000). Authentic assessment of teaching in context. Teaching and Teacher Education, 16 (5-6), 523-545.

Dietz, M. (1998). Changing the practice of teacher education: Standards and assessment as a lever for change. Washington, DC: AACTE.

Fuller, F. (1969). Concerns of teachers: A developmental conceptualization. American Educational Research, 6 (2), 207-226.

Glassberg, S., & Sprinthall, N. (1980). Student teaching: A developmental approach. Journal of Teacher Education, 31 (2), 31, 35-38.

Gordon, T. (1974). T.E.T.: Teacher effectiveness training. New York: David McKay.

Hunt, D. (1974). Matching models of education. Toronto, Canada: Ontario Institute for Studies in Education.

Hunt, D. (1976). Teachers' adaptation: 'Reading' and 'flexing' to students. Journal of Teacher Education, 27, 268-275.

Joyce, B., & Showers, B. (1996). Staff development for student achievement. New York: Longman.

Lyons, N. (1998). Portfolio possibilities: Validating a new teacher professionalism. In N. Lyons (Ed.), With portfolio in hand: Validating the new teacher professionalism (pp. 11-22).

MacCallum, J. (1993). Teacher reasoning and moral judgment in the context of student discipline situations. Journal of Moral Education, 22 (1), 3-17.

Miller, A. (1981). Conceptual matching models and interactional research in education. Review of Educational Research, 51 (1), 33-84.

Oja, S., & Sprinthall, N. (1978). Psychological and moral development of teachers: Can you teach old dogs? In N.A. Sprinthall & R.L. Mosher (Eds), Value development as the aim of education (pp. 117-134). Schenectady, NY: Character Research Press.

Peace, S. (1992). A study of school counselor induction: A cognitive developmental mentor supervisor training program. Unpublished doctoral dissertation, North Carolina State University, Raleigh.

Porter, A., Youngs, P., & Odden, A. (2001). Advances in teacher assessments and their uses. In V. Richardson (Ed.), Handbook of research on teaching (4th ed.). Washington, DC: AERA.

Reiman, A. (1988). An intervention study of long-term mentor training: Relationships between cognitive-developmental theory and reflection. Unpublished doctoral dissertation, North Carolina State University, Raleigh.

Reiman, A., & Parramore, B. (1993). Promoting preservice teacher development through extended field experience. In M. O'Hair & S. Odell (Eds.), Teacher education yearbook I: Diversity and teaching (pp. 111-121). Forth Worth, TX: Harcourt Brace Jovanovich.

Reiman, A., & Parramore, B. (1994). First year teachers' assignments, expectations, and development: A collaborative investigation. In M. O'Hair & S. Odell (Eds.), Teacher education yearbook II: Partnerships in education (pp. 120-134). Fort Worth, TX: Harcourt Brace Jovanovich.

Reiman, A., & Thies-Sprinthall, L. (1993). Promoting the development of mentor teachers: Theory and research programs using guided reflection. Journal of Research and Development in Education, 26 (3), 179-185.

Reiman, A., & Thies-Sprinthall, L. (1998). Mentoring and supervision for teacher development. New York: Longman.

Rest, J. (1986). DIT manual: Manual for the defining issues test. Minneapolis, MN: Center for the Study of Ethical Development, University of Minnesota.

Rest, J. (1994). Background: Theory and research. In J.Rest & D. Narvaez (Eds.), Moral development in the professions: Psychology and applied ethics (pp. 1-26). Hillsdale, NJ: Erlbaum.

Rest, J., & Narvaez, D. (1994). Moral development in the professions: Psychology and applied ethics. Hillsdale, NJ: Erlbaum.

Senne, T. (1997). The interactive teaching portfolio: A developmental approach to promoting professional development in physical education student teachers Unpublished doctoral dissertation, North Carolina State University, Raleigh.

Senne, T. (1999). The Developmental Teaching Portfolio Model [DTPM]. East Carolina University Summer Teaching Stipend Grant.

Senne, T., & Rikard, G. L. (2002). Experiencing the portfolio process during the internship: A comparative analysis of two PETE portfolio models. Journal of Teaching in Physical Education, 21 (3), 309-336.

Senne, T., & Rikard, G. L. (in progress). Portfolio development as a three-semester process: The value of a sequential experience.

Sprinthall, N., Reiman, A., & Thies-Sprinthall, L. (1996). Teacher professional development. In J. Sikula (Ed.), Handbook of research on teacher education (2nd ed., pp 666-703). New York: Macmillan.

Sprinthall, N., & Thies-Sprinthall, L. (1983). The need for theoretical frameworks in education teachers: A cognitive-developmental perspective. In K. Howey & W. Gardner (Eds.), Education of teachers: A look ahead (pp. 74-97). New York: Longman.

Thies-Sprinthall, L. (1984). Promoting the developmental growth of supervising teachers: Theory, research programs, and implications. Journal of Teacher Education, 35 (3), 53-60.

Trube, M., & Madden, P. (2001). National standards, state goals, and the university's vision align to provide a framework for the pre-service teacher portfolio. (ERIC Document Reproduction Service No. ED 454169)

Wallace, M. (1991). Training foreign language teachers: A reflective approach. New York: Cambridge University Press.

Watson, R. (1995). Early field experiences in teacher education: A developmental model. Unpublished doctoral dissertation, North Carolina State University, Raleigh.

Zeichner, K., & Wray, S. (2001). The teaching portfolio in U.S. teacher education programs: What we know and what we need to know. Teaching and Teacher Education, 17 (5), 613-621.

Table 1. Summary of Changes in DIT Mean Gain P Scores Across Developmental Portfolio Intervention Studies

Study/Group	Pretest	Posttest	Mean Gain	S.D.	*t*-Value
Study 1					
Senne (1997)					
[Internship, N=35]					
Experimental	27.61	30.50	+2.89	13.39	+0.220
Comparison	32.94	37.06	+4.12	19.36	
Effect size = .072					
Study 2					
Senne & Rikard (2002)					
[Internship, N=42]					
Experimental	30.84	33.86	+3.02	10.77	+0.218
Comparison	30.19	33.00	+2.81	13.84	
Study 3					
Senne & Rikard (in review)					
[3-semester implementation, N=14]					
Experimental	25.00	35.38	+10.38*	12.28	
Comparison	33.34	30.34	- 3.00	6.60	

*Note. Significant within group gain change (.025>*p*>.01); *t*-value = -2.415

Figure 1. Coaching Model Applied to Teaching Portfolio Construction

Coaching Component	**Application**
Rationale	Introduction & overview of teaching portfolio Review of teaching behavior foci
Demonstration	Exemplary model of teaching portfolio is shared
Practice & Feedback	Actual work on portfolio construction during class, intern seminars, and submitted component drafts. Feedback provided by peers and investigator. Investigator provides timeline for draft submissions of component parts. Written feedback is provided on draft submissions.
Adapt & Generalize	Skills developed become part of teacher candidate's instructional repertoire. Teacher candidates become self-directed learners in charge of own teaching skill acquisition. In addition, teacher candidates can then adapt portfolio model to NC Performance-Based Product for continuing licensure.

Figure 2. Developmental Teaching Portfolio Model [DTPM].

Elementary Methods – EXSS 3900	Secondary Methods – EXSS 4323	Internship – EXSS 4325
INTASC 9 **Reflective Practice/Professional Growth** Development plan for improvement in teaching Video analysis of teaching Documentation of improvement via systematic observation instruments Culminating reflection on improvement in teaching	**Getting to Know Me...** Autobiography Resume Teaching philosophy [bulleted]	**Getting to Know Me...** Autobiography [4323] Updated resume [4323] Teaching philosophy [fully developed]
	Component A: Instructional Practice Instructional unit plan [secondary level] Videotape of teaching practicum [MS/HS] Video analysis of teaching episodes	**Component A: Instructional Practice** Instructional unit plan [3900 or 4323] 5 contiguous lesson plans Related student work Assessment data [pre/post] Analysis of data Directed reflection
Lesson Plan Development & Reflection Lesson plans/reflections [elementary teaching practicum]	**Component B: Classroom Management** Internship site management plan** Teacher candidate mgt plan [rules, protocols, consequences, intervention strategies, preventive behavior mgt, motivation techniques, implementation plan] Bulletin board [visual, description/self-evaluation, completed rubric by clinical teacher]	**Component B: Classroom Management** Intern management plan [4323] Log of discipline incidents or case study Directed reflection
Computer Technology Component E-mails Listserv PE Central web site Unit plan resources via search engines & web sites	**INTASC 9** **Reflective Practice/Professional Growth** Self-assessment of current teaching effectiveness [pre- & post-assessment] Development plan for improvement in teaching Documentation of improvement via systematic observation instruments Culminating reflection on improvement in teaching	**INTASC 9: Reflective Practice/Professional Growth** Self-assessment of current teaching effectiveness [pre- & post-assessment] Development plan for improvement in teaching Documentation of improvement via systematic observation instruments Culminating reflection on improvement in teaching
*Note: An elementary level instructional unit plan is also developed as a separate project.	**Lesson Development & Reflection** Lesson plans/reflections [MS & HS teaching practica] Monthly senior I reflections Senior 1 culminating reflection	**Ongoing Reflections...** Intern bi-weekly reflection logs
	Component C: Technology Check sheet verification of beginning & advanced competencies Technology product examples NASPE-L listserv commentary PE Central commentary & selected documents	**Videotape of Instruction** Videotape of instructional/managerial episode from unit plan* Preview of video contents [instructional & managerial aspects] *Reflection of video analysis occurs in Component's A & B directed reflections
	**Note: Teacher candidates spend 1 full day/week at their assigned internship site the semester prior to student teaching.	**Component C: Technology** Check sheet verification [4323] Technology product examples [4323] Technology implementation – unit of instruction [Component A]

Developed by Terry A. Senne, Ph.D. as part of an East Carolina University Summer Teaching Stipend Grant (1999).

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Organization/Address: EAST CAROLINA UNIV. / DEPT. OF EXSS 152 MINGES COLISEUM GREENVILLE, NC 27858	Telephone: (252) 328-4643	FAX: (252) 328-4654
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